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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,263	06/06/2001	Jin Okimoto	016907-1234	5184

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WASHINGTON, DC 20007

EXAMINER

LAMB, TWYLER MARIE

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,263

Applicant(s)

OKIMOTO, JIN

Examiner

Twyler M. Lamb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuji Xerox (JP 6-105119) in view of Igarashi et al. (Igarashi) (US 6,679,912).

With regard to claim 1, Fuji Xerox (JP 6-105119) discloses an image forming apparatus comprising: first storing means (code storage section 13) for storing image data; judging means (control section 23) for dividing said image data stored in said first storing means into a plurality of blocks and making judgment upon whether all pixels are white in accordance with each of said divided blocks; rotation processing means (rotation processing section 18) for performing rotation processing of image data of a block when it is determined that not all pixels in said block are white by said judging means; controlling means for controlling to omit rotation processing of image data of a block when it is determined that all pixels are white in said block by said judging means; compressing means for compressing image data of a block which skips rotation processing by said controlling means or image data of a block subjected to rotation processing by said rotation processing means and determining resulting data as code data; and second storing means (page memory 19) for storing said code data

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compressed by said compressing means (See Constitution of Abstract, whole paragraph).

Fuji Xerox (JP 6-105119) does not expressly teach a virtual white line being used a reference line or that a line immediately preceding the block is used as the reference line.

Igarashi discloses a data compression method and apparatus that employs a high speed MMR compression processing method that teaches using a reference line to precede a coding line distinguishing the change in pixel colors (col 4, lines 14-19).

Fuji Xerox (JP 6-105119) & Igarashi are combinable because they both rotate and compress image data.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Fuji Xerox (JP 6-105119) to include the use of a reference line to precede a coding line distinguishing the change in pixel colors as taught by Igarashi.

The suggestion/motivation for doing so would have been to provide high speed compression by being able to easily distinguish between changing pixels by use or the reference line as taught by Igarashi in col 4, lines 14-41.

Therefore, it would have been obvious to combine Fuji Xerox (JP 6-105119) with Igarashi to obtain the invention as specified in claim 1.

With regard to claim 2, Fuji Xerox (JP 6-105119) discloses wherein said first storing means (code storage section 13) and said second storing means are provided for a page memory (page memory 19).

With regard to claim 3, Fuji Xerox (JP 6-105119) discloses wherein said judging

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means divides image data into blocks in units of a plurality of lines in said image data (Which reads on the image data being expanded and stored in an n-line buffer 17). (See Constitution of Abstract, lines 1-3).

With regard to claim 4, Fuji Xerox (JP 6-105119) discloses wherein said judging means divides image data into a plurality of blocks in units of 32-bit lines in said image data (Which reads on the image data being expanded and stored in an n-line buffer 17, (n) could very well be 32-bit line). (See Constitution of Abstract, lines 1-3).

With regard to claim 5, Fuji Xerox (JP 6-105119) discloses wherein said rotation processing means carries out rotation processing in units of one cell with n bits x n bits constituting a block being determined as one cell (See Constitution of Abstract, lines 1-5).

With regard to claim 6, Fuji Xerox (JP 6-105119) discloses wherein said rotation processing means carries out rotation processing in units of one cell with 32 bits x 32 bits constituting a block being determined as one cell (Which reads on the image data being expanded and stored in an n-line buffer 17, (n) could very well be 32-bit line). (See Constitution of Abstract, lines 1-5).

With regard to claim 7, Fuji Xerox (JP 6-105119) discloses wherein said rotation processing means carries out rotation processing of 270 degrees in the clockwise direction in units of one cell with n bits x n bits constituting a block being determined as one cell. (See Constitution of Abstract, lines 1-5).

With regard to claim 8, Fuji Xerox (JP 6-105119) discloses wherein said rotation processing means performs rotation processing of 270 degrees in the clockwise

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direction in units of one cell with 32 bits x 32 bits constituting a block being determined as one cell (Which reads on the image data being expanded and stored in an n-line buffer 17, (n) could very well be 32-bit line). (See Constitution of Abstract, lines 1-5).

With regard to claim 9, Fuji Xerox (JP 6-105119) discloses wherein said controlling means is a controller for controlling a page memory to which said first storing means and said second storing means are provided (See Constitution of Abstract, whole paragraph).

With regard to claim 10, Fuji Xerox (JP 6-105119) does not clearly teach wherein said compressing means performs compression using a Modified Modified READ Code.

Igarashi discloses a data compression method and apparatus that employs a high speed MMR compression processing method that teaches using a reference line to precede a coding line distinguishing the change in pixel colors (col 4, lines 14-19).

Fuji Xerox (JP 6-105119) & Igarashi are combinable because they both rotate and compress image data.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Fuji Xerox (JP 6-105119) to include the use of a reference line to precede a coding line distinguishing the change in pixel colors as taught by Igarashi.

The suggestion/motivation for doing so would have been to provide high speed compression by being able to easily distinguish between changing pixels by use or the reference line as taught by Igarashi in col 4, lines 14-41.

Therefore, it would have been obvious to combine Fuji Xerox (JP 6-105119) with Igarashi to obtain the invention as specified in claim 10.

With regard to claim 11, Fuji Xerox (JP 6-105119) discloses an image forming apparatus comprising: first storing means (code storage section 13) for storing image data; judging means (control section 23) for dividing said image data stored in said first storing means into a plurality of blocks and making judgment upon whether all pixels are white in accordance with each of said divided blocks; rotation processing means (rotation processing section 18) for performing rotation processing of image data of a block when it is determined that not all pixels in said block are white by said judging means; second storing means (n-line buffer 17) for storing image data of a block subjected to rotation processing by said rotation processing means; controlling means for controlling to omit rotation processing of image data of a block when it is determined that all pixels are white in said block by said judging means; compressing means for compressing image data of a block which skips rotation processing by said controlling means or image data of a block subjected to rotation processing by said rotation processing means and determining resulting data as code data; and third storing means (page memory 19) for storing said code data compressed by said compressing means (See Constitution of Abstract, whole paragraph).

Fuji Xerox (JP 6-105119) does not expressly teach a virtual white line being used a reference line or that a line immediately preceding the block is used as the reference line.

Igarashi discloses a data compression method and apparatus that employs a high speed MMR compression processing method that teaches using a reference line to precede a coding line distinguishing the change in pixel colors (col 4, lines 14-19).

Fuji Xerox (JP 6-105119) & Igarashi are combinable because they both rotate and compress image data.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Fuji Xerox (JP 6-105119) to include the use of a reference line to precede a coding line distinguishing the change in pixel colors as taught by Igarashi.

The suggestion/motivation for doing so would have been to provide high speed compression by being able to easily distinguish between changing pixels by use of the reference line as taught by Igarashi in col 4, lines 14-41.

Therefore, it would have been obvious to combine Fuji Xerox (JP 6-105119) with Igarashi to obtain the invention as specified in claim 11.

With regard to claims 12 and 14, Fuji Xerox (JP 6-105119) discloses wherein said first storing means (code storage section 13), said second storing means (n-line buffer 17) and said third storing means are provided for a page memory (page memory 19).

With regard to claim 13, Fuji Xerox (JP 6-105119) discloses an image forming apparatus which has compressing means for compressing image data and forms an image, said image forming apparatus comprising: first storing means for storing image data; judging means for dividing image data stored in said first storing means into a plurality of blocks, performing bit retrieval in accordance with each of said divided blocks, and making judgment upon whether all pixels of each of said blocks are white; rotation processing means for performing rotation processing of image data of a block which is determined that not all pixels thereof are white by said judging means; second

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storing means for storing image data of a block subjected to rotation processing by said rotation processing means; first controlling means for performing bit retrieval of image data of a block stored in said second storing means, compressing said image data by said compressing means, and determining resulting data as code data; second controlling means for compressing by said compressing means image data of a block determined that all pixels thereof are white by said judging means, and determining resulting data as code data; and third storing means for storing said code data controlled and compressed by said first controlling means or said code data controlled and compressed by said second controlling means (It is understood that the control section 23 performs the jobs of the two control sections cited in claim 13.) (See Constitution of Abstract, whole paragraph).

Fuji Xerox (JP 6-105119) does not expressly teach a virtual white line being used a reference line or that a line immediately preceding the block is used as the reference line.

Igarashi discloses a data compression method and apparatus that employs a high speed MMR compression processing method that teaches using a reference line to precede a coding line distinguishing the change in pixel colors (col 4, lines 14-19).

Fuji Xerox (JP 6-105119) & Igarashi are combinable because they both rotate and compress image data.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Fuji Xerox (JP 6-105119) to include the use of a reference line to precede a coding line distinguishing the change in pixel colors as taught by Igarashi.

The suggestion/motivation for doing so would have been to provide high speed compression by being able to easily distinguish between changing pixels by use or the reference line as taught by Igarashi in col 4, lines 14-41.

Therefore, it would have been obvious to combine Fuji Xerox (JP 6-105119) with Igarashi to obtain the invention as specified in claim 13.

With regard to claim 15, Fuji Xerox (JP 6-105119) discloses wherein said first controlling means and said second controlling means are controllers for controlling a page memory to which said first storing means and said second storing means are provided (See Constitution of Abstract, whole paragraph).

Response to Arguments


3. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Twyler M. Lamb whose telephone number is 571-272-7406. The examiner can normally be reached on Mon, Tues and Thurs 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Twyler M. Lamb
Primary Examiner
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